AIM AND OBJECTIVE:

- To evaluate the salivary levels of chemerin in three groups **i**. systemically and periodontally healthy subjects **ii.** systemically healthy subjects with chronic periodontitis **iii.** Type II Diabetes Mellitus subjects with chronic periodontitis.
- To compare the salivary levels of chemerin among systemically and periodontally healthy subjects, subjects with CP with / without Type II DM.
- To correlate the salivary levels of chemerin with Glycated Hemoglobin (HbA1c) and Clinical Attachment level (CAL) in systemically and periodontally healthy subjects, subjects with chronic periodontitis with / without Type II DM.

MATERIALS AND METHODS:

A total of 75 subjects were included in the study, who were divided into three groups: Group – I (Systemically & periodontally healthy *n = 25*); Group – II (Sytemically healthy with generalized chronic periodontitis *n = 25*); Group – III (Generalized chronic periodontitis with Type – II Diabetes Mellitus *n = 25*). The clinical parameters including Plaque index (PI), Gingival index (GI), Probing depth (PD), Clinical attachment level (CAL) and Body mass index (BMI) and haematological parameters like Random blood glucose (RBG), Glycated haemoglobin (HbA1c) levels were recorded and saliva samples were collected from all the subjects prior to non-surgical periodontal therapy. The levels of chemerin in saliva samples were analysed by using a sandwich enzyme-linked immunosorbent assay (ELISA).

STATISTICAL ANALYSIS:

Data were analysed using the statistical package for the Social Sciences (SPSS, ver.18.0; SPSS Inc., Chicago, IL, USA). Shapiro Wilks test was used to assess normality of the obtained data. Data were found to be in non-normal distribution hence descriptive statistics were obtained. Comparison of variables between the study groups were performed using Kruskal Wallis H test. Kendall's tau correlation coefficient was employed to find correlation between overall volumes of chemerin with HbA1c levels and CAL.

RESULTS:

The clinical parameters (PI, GI, PPD, CAL and BMI) were elevated in group-III and group-II and least in group-I and showed statistical significance ($p < 0.05$). Haematological parameters (RBG and HbA1c) showed statistical significant elevated values in group-III compared to group-II and group-I ($p < 0.05$). Higher salivary chemerin levels were observed in group-III (71.4742 ng/ml) compared to group-II (47.8733 ng/ml) and group-I (43.8068 ng/ml). The differences were not statistically significant ($p < 0.172$). There is no statistically significant correlation observed between chemerin and HbA1c (p - 0.077); chemerin and CAL (p - 0.115).

SUMMARY AND CONCLUSION:

Chemerin in saliva can be considered as a biomarker for subjects with chronic periodontitis with / without Type-II DM but the difference was not statistically significant.

KEY WORDS: Chemerin, Adipokines, Body Mass Index, Enzyme linked immunosorbant assay, Glycated Hemoglobin, Waist-hip ratio.